Methods and Reporting

The USEPA has specified regulations for Primary and Secondary Standards. National Primary Drinking Water Regulations (NPDWRs) are enforceable standards for public water systems to limit certain contaminants. National Secondary Water Regulations (NSDWRs) are non-enforceable guidelines for contaminants in public water systems that may cause cosmetic or aesthetic effects.

Parameter	Operating Range	Units	e-sens Method
pH[1,7]	5-11		Potentiometric Ion Selective Electrode[1,7]
ORP	-1000-2000	mV	Platinum Eh Electrode
Conductivity[2]	50-2500	µS/cm	4 cell platinum Electrode[2]
Total Dissolved Solids[3]	25-1250	mg/L	Calculated from Conductivity[3]
Free Chlorine[4]	0.07-5.00	mg/L	e-sens AMCD Method[4]
Monochloramine[4]	0.07-5.00	mg/L	Calculated Difference of Free and Total
Total Chlorine[4]	0.07-5.00	mg/L	e-sens AMCD Method[4]
Ammonium	0.07-5.00	mg/L	Potentiometric Ion Selective Electrode
Free Ammonia	0.07-5.00	mg/L	Calculated difference from Total and Monochloramine
Total Ammonia	0.07-5.00	mg/L	Calculated sum of all ammonia species including monochloramine
Chlorine to Ammonia Ratio	0.01-100.00		Calculation from measured parameters
Nitrification Capacity	0.07-10.0	mg/L	Calculated from measured parameters
Calcium Hardness[5]	5-1000	mg/L	Conversion from Ionic Calcium[5]
Total Hardness[5]	5-1000	mg/L	Combined Conversion from measured Calcium and Magnesium[5]
Ionic Calcium	3-400	mg/L	Potentiometric Ion Selective Electrode
Sample Temperature[6]	2.0-45.0	°C	Electronic Thermometer[6]
Dissolved Carbon Dioxide[8]	0.05-50	mg/L	Calculated from measured parameters[8]
Total Alkalinity	10-325	mg/L	Automated Potentiometric Titration
Langelier Saturation Index[7]	-10-10.00	pts	Calculated from measured parameters[7]
Ryzner Stability Index[7]	0-12.00		Calculated from measured parameters[7]
Aggressive Index[7]	7.00-15.00		Calculated from measured parameters[7]
Dissolved Inorganic Carbon[8]	1-200	mg/L	Calculated from measured parameters[8]

[1]Compliant with USEPA method 150.3 for NSDWR monitoring
[2]Compliant with Standard Method 2510-B for reporting

[3]Total Dissolved Solids (TDS) is a calculated value from the direct conductivity measurement. TDS is a secondary standard under NSDWR

[4] e-sens' AMCD method for Free and Total Chlorine is in the process of being EPA approved by comparison to AWWA method 4500-Cl G. DPD Colorimetric Method. Chlorines and Chloramines are subject to NPDWR regulations

[5]Standard Method 2340-B can be used to calculate hardness from the separate measurements of ionic calcium and magnesium

[6]Complies with Standard Method 2550-B for laboratory and field measurements of temperature

[7]Corrosivity is a secondary standard guideline under NSDWR. pH and indexes can be used to determine corrosion or scale likelihood of water

[8]Standard Method 4500-CO_2-D can be used to calculate forms of carbon dioxide and alkalinity

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